Appendix: List of Terms

AAL: Average Annual Loss

Alternative: The term “alternative” refers to the risk reduction measure, based on which the hazard map is created. No alternative means we are looking at the initially imported hazard map

Apache: standard web server or http daemon

API: a programming interface, a set of defined functions and attributes for accessing the functionality of an object or library

BCR: benefit-cost ratio, summarizes the overall value for money of a project

CBA: cost-benefit analysis

client: a computer application, such as a web browser, that runs on a user's local computer or workstation and connects to a server as necessary

client-side: refers to operations that are performed by the client in a client–server relationship in a computer network

cURL: a command line tool for getting or sending files using URL syntax

database: an organized collection of data; the data is usually represented as tables

DBMS: database management system, a software system for managing and maintaining databases

Debian: Linux distribution

DSS: decision support system

Elements at Risk: Population, properties, economic activities, including public services, or any other defined values exposed to hazards in a given area. Also referred to as “assets”. The amount of elements-at-risk can be quantified either in numbers (of buildings, people etc.), in monetary value (replacement costs, market costs etc), area or perception (importance of elements-at risk).

Exposure: Exposure indicates the degree to which the elements-at-risk are exposed to a particular hazard. The spatial interaction between the elements-at risk and the hazard are depicted by simple map overlaying of the hazard map with the elements-at-risk map.

ExtJS: JavaScript library for extended functionality

Future Year: Future year of the scenario

GeoExt: JavaScript library for adding geospatial functionality to web pages

Geoserver: server that can offer maps and images via OGC protocols such as WMS and WFS

GIS: geographic information system, software system for creating, storing, analyzing and managing spatial data and associated attributes

GIT: software revision control system

Github: web-based Git repository hosting service, which offers all of the distributed revision control and source code management functionality of Git

GUI: graphical user-interface

Hazard: A potentially damaging physical event, phenomenon or human activity that may cause loss of life or injury, property damage, social and economic disruption or environmental degradation. This event has a probability of occurrence within a specified period of time and within a given area, and has a given intensity

Hazard map: raster file (geotiff) showing either the spatial probability or the intensity of an event

IRR: Internal rate of return, a profitability metric

JavaScript: programming language for making user-interfaces in web-browsers

libcurl: a free client-side URL transfer library, supporting various protocols such as FTP and HTTP

Linux: open source operating system

Loss: Number of potentially injured people or damage costs in the exposed to hazard elements at risk

Loss Map: Elements at risk data having information about the calculated losses in the exposed areas

Loss type: monetary (economic) or nonmonetary (number of people) value type

MCDM: multi-criteria decision making, considers multiple criteria in decision-making environments

mod_php5: Apache library offering PHP functionality

mod_python: Apache library offering Pyhton functionality

MVC: model-view-controller, a software architectural pattern for implementing user interfaces

NetBeans: integrated development environment for software

NPV: net present value, the sum of the present values of the individual cash flows of the same entity

OGC: open geospatial consortium

OpenLayers: javascript library to load, display and render maps from multiple sources on web pages

pgsql: PHP library for connecting to Postgresql

PHP: programming language used for web programming

PostGIS: module that offers spatial data types and functionality on top of Postgresql

Postgresql: open source database management system (DBMS)

Project: The name of the project assigned to the study area. It should refer to the purpose of the analysis

pycurl: Python library for connecting to CURL (in the system this is used to connect to the REST API of the Geoserver)

pygresql: Python library for connecting to Postgresql

Python: general purpose programming language

REST API: API for configuring web services via URLs

Return Period: The Return Period is the temporal probability of an event (e.g. 10, 25, 50, 100 years), for which spatial and intensity probability maps are available. The temporal probability might also change (e.g. in case of climate change scenarios) without changing the actual areas affected.

Risk: The probability of harmful consequences, or expected losses (deaths, injuries, property, livelihoods, economic activity disrupted or environment damaged) resulting from interactions between hazards and vulnerable conditions in a given area and time period.

Risk curve: a curve that expresses risk as a set of probability per return period points

Risk map: Administrative Unit polygon with attached annualized risk value

Scenario: Future regional or global trends affecting the changes in risk. e.g.: climate change, land use change. No scenario means we are looking at the current situation.

SDSS: spatial DSS, using maps and other spatial data for making decisions

server: computer program, such as a web server, that runs on a remote computer, reachable by another program, such as a web browser, that is running on a user's local computer or workstation

server-side: refers to operations that are performed by the server in a client–server relationship in computer networking

spatial data: attribute data that has a spatial or geographic component in the form of a set of coordinates

SRID: Spatial Reference System Identifier, a unique value used to unambiguously identify projected, unprojected, and local spatial coordinate system definitions.

Study Area: Name of the geographic area of interest where the risk analysis is performed. It can be at a local or a regional scale depending on the required level of details.

three-tier architecture: architecture that separates the server-side code into three parts, the database for storing the data, the middleware that offers the functionality and the presentation tier that is responsible for the presentation of the information

Tomcat: Java container for running web servers written in Java

UI: user interface

URL: uniform resource locator

widget: an element of a GUI such as a button, toolbar or dropdown menu

WMS: web map service protocol for transferring spatial data as images

WFS: web feature service for transferring spatial data as vector data